

Work Order ID 68407

Tuesday, April 12, 2011 3:38:47 PM

**PRELIMINARY ISSUE**

Page 1

Item ID: D4370-041

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Fwd Wearplate Assembly

Start Date: 4/12/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 4/15/2011 Req'd Qty: 1.00



Customer:



Reference:

Approvals:

Process Plan: *RP*Date: *4/14/12*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D4370

PA1

100



Waterjet

FLOW CNC Waterjet

304 .050

Memo

1-Cut as per Dwg (D4370-1)

Dwg Rev: *QAI*Prog Rev: *QAI*

2-Deburr if necessary

SCRAP*Scrap**B11-4-19**(1)*

110



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

0.00

B11-4-19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 68407

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Page 2

Item ID: D4370-041

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Fwd Wearplate Assembly

Start Date: 4/12/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 4/15/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC8- Inspect parts - second check

0.00 - inspected to PA1



QC

Memo

0.00 Day only
Simulator (X)

Quality Control

130

Form as per dwg

0.00



Brake NC

Memo

0.00 SB 11/04/20

Brake NC

(1)

140

QC5- Inspect part completeness to step on W/O

0.00 - inspected to PA1



QC

Memo

0.00 Day only
SB 11/04/20

Quality Control

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

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Work Order ID 68407



Tuesday, April 12, 2011 3:38:47 PM



Page 3

Item ID:	D4370-041	Accept		Setup	Start	
Revision ID:	PRELIM				Stop	
Item Name:	Fwd Wearplate Assembly					
Start Date:	4/12/2011	Start Qty:	1.00		Cust Item ID:	
Required Date:	4/15/2011	Req'd Qty:	1.00		Customer:	
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150		0.00							
									
Large Fab	Memo	0.00							
Large Fab	1- on D4371-1, fill cut outs with hardcoat welding rod as per dwg D4370 **DT9756** 2059 B Hardcoat Welding Rod BATCH#: _____ 2-weld D4371-1 to wearplate by positioning holes together as per dwg D4370 304 S.S. Welding Rod BATCH #: _____ 3-Transfer drill holes in bar								
160	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
									
QC	Memo	0.00							
Quality Control									

RD2382

POSITIVE RECALL
EFFECTIVE 11-04-13 AUTH LL
RELEASED _____ DATE _____

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

[illegible]

Page 4

[illegible]**Setup Start**

Stop

[REDACTED]

Cust Item ID:

1000

Customer:

Reference:

Run Start

Stop

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

**Insp.
Stamp**

0.00

RESEARCH DESIGN

QC

Memo

0.00

Quality Control

0.00

Small Fab

Memo

0.00

Small Fab

1- After finish, coat entire top (concave) surface as per note 10 on sheet 2 dwg D4370.

0.00

[illegible]

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

[illegible]

Tuesday, April 12, 2011 3:38:47 PM

Accept

[illegible]**Setup Start**

Stop

**Cust Item ID:**

Customer:

Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Operation Description

Set Up/ Run Hours

Tool ID

Tool #**Plan
Code**

**Accept
Qty**

Reject
QtyReject
Number

**Insp.
Stamp**

Identify as per dwg & Stock Location: _____

0.00

Abstract

Packaging

Memo

0.00

Packaging

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

Tuesday, April 12, 2011 3:38:53 PM

Work Order ID: 68407



Parent Item: D4370-041



Parent Item Name: Fwd Wearplate Assembly

Start Date: 4/12/2011

Required Date: 4/15/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 11.04.12 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304S18GA

Purchased

No

100

sf

204.0000

1.914

2.014737



B11-4-19

304/316 .050 Sheet

Location

Loc Qty

Loc Code

MAT020

204

111743

1

112178

4

113062

18

116135

48

116604

37

116979

96

116135

①

D4371-1

Manufactured

No

150

Each

0.0000

1

1



Bar

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

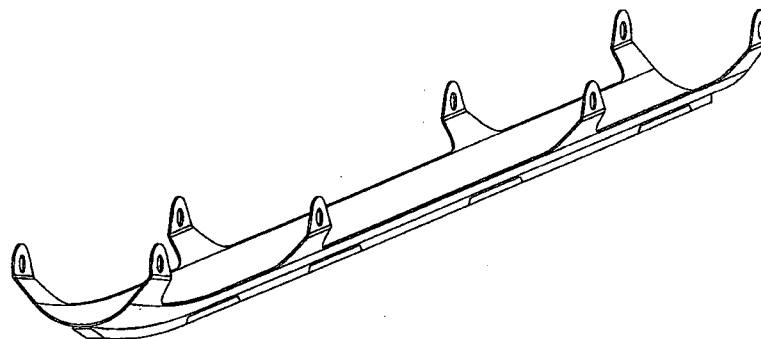
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

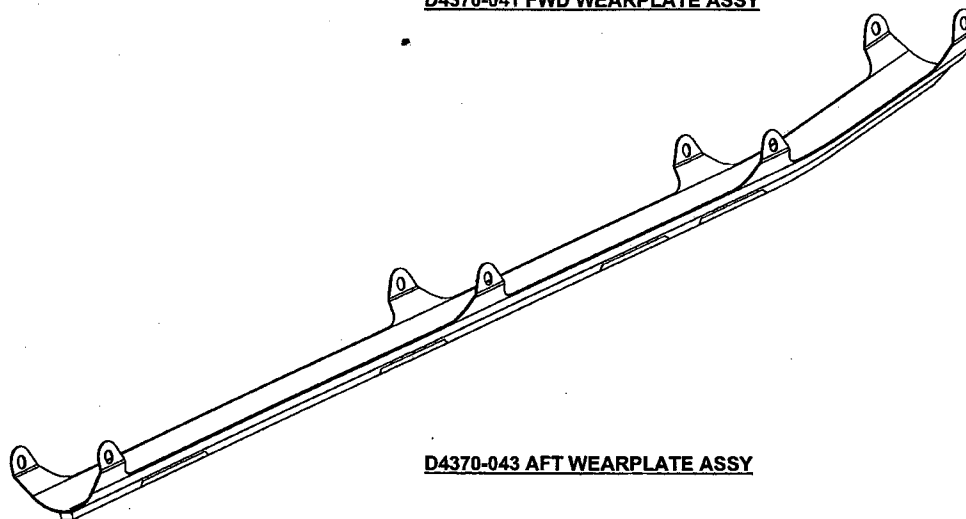
NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

ITEM	QTY -041	QTY -043	PART NUMBER	DESCRIPTION
	X		D4370-041	FWD WEARPLATE ASSY
		X	D4370-043	AFT WEARPLATE ASSY
1	1		D4370-1	PLATE
2		1	D4370-3	PLATE
3	1		D4371-1	BAR
4		1	D4371-3	BAR
5	A/R	A/R	2059B	HARDCOAT
6	A/R	A/R	ROCKGUARD 4714	SEALANT



D4370-041 FWD WEARPLATE ASSY



D4370-043 AFT WEARPLATE ASSY

SHOP COPY
RETURN TO:
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 68407
11-04-12
**PRELIMINARY
ISSUE**

PA1	NEW ISSUE	SC	11.03.24
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. PA1
MFG. APPR.		D4370	SHEET 1 OF 5
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE ASSY	NTS
DATE	11.03.24	COPYRIGHT © 2011 BY DART AEROSPACE USA INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA INC.	

8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

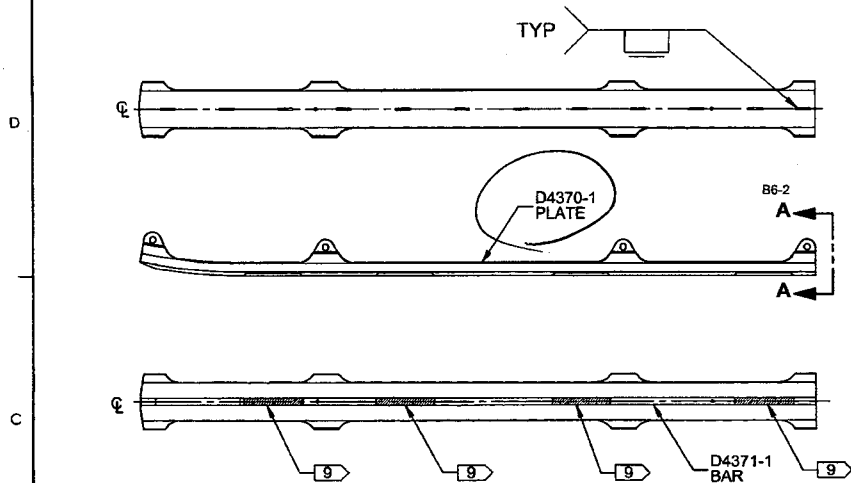
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

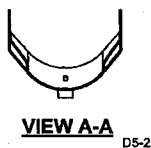
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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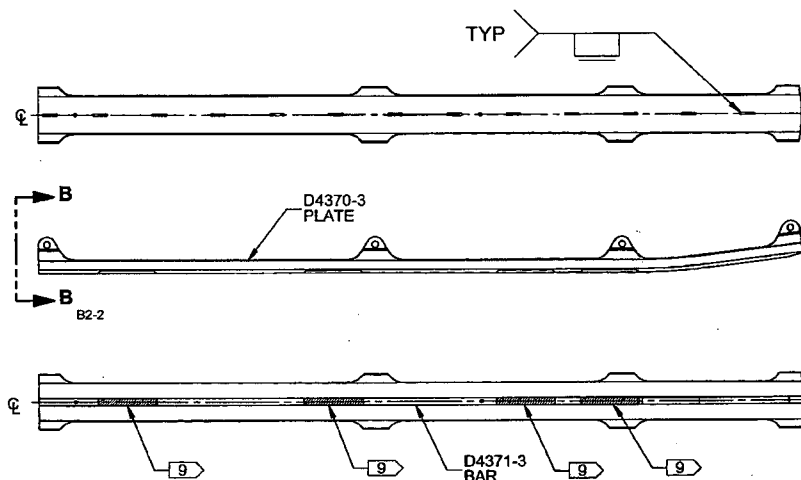
8 7 6 5 4 3 2 1



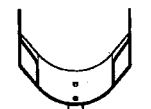
D4370-041 FWD WEARPLATE ASSY



VIEW A-A



D4370-043 AFT WEARPLATE ASSY



VIEW B-B

u1068407

**PRELIMINARY
ISSUE**

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4370-04X" PER QSI 044 6.1
- 7) WEIGHT: D4370-041 = 4.41 lbs; D4370-043 = 4.89 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.19 THICK X 0.50 WIDE, FLUSH WITH D4371-X BAR ON ALL 3 SURFACES
- 10) AFTER FINISH, COAT ENTIRE TOP (CONCAVE) SURFACE WITH A LAYER OF SIKAFLEX-241/291 OR PROSEAL 890 OR PROSEAL 1422 OR MIL-S-8802 CLASS B SEALANT OR PLUS ONE ROCKGUARD 4714, 0.020-0.040 THICK

DESIGN	SC	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	SC		
CHECKED	<i>[Signature]</i>	DRAWING NO. D4370	REV. PA1 SHEET 2 OF 5
MFG. APPR.	<i>[Signature]</i>	TITLE	SCALE
APPROVED		WEARPLATE ASSY	NTS
DE APPR.		COPYRIGHT © 2011 BY DART AEROSPACE USA INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA INC.	
DATE	11.03.24		

8 7 6 5 4 3 2 1

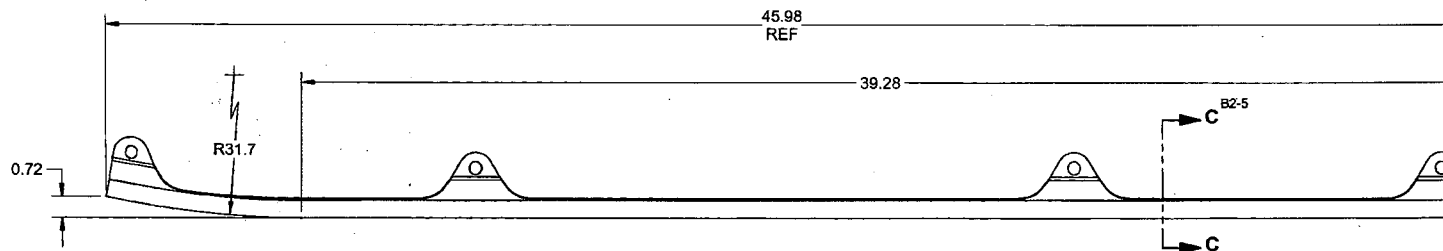
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

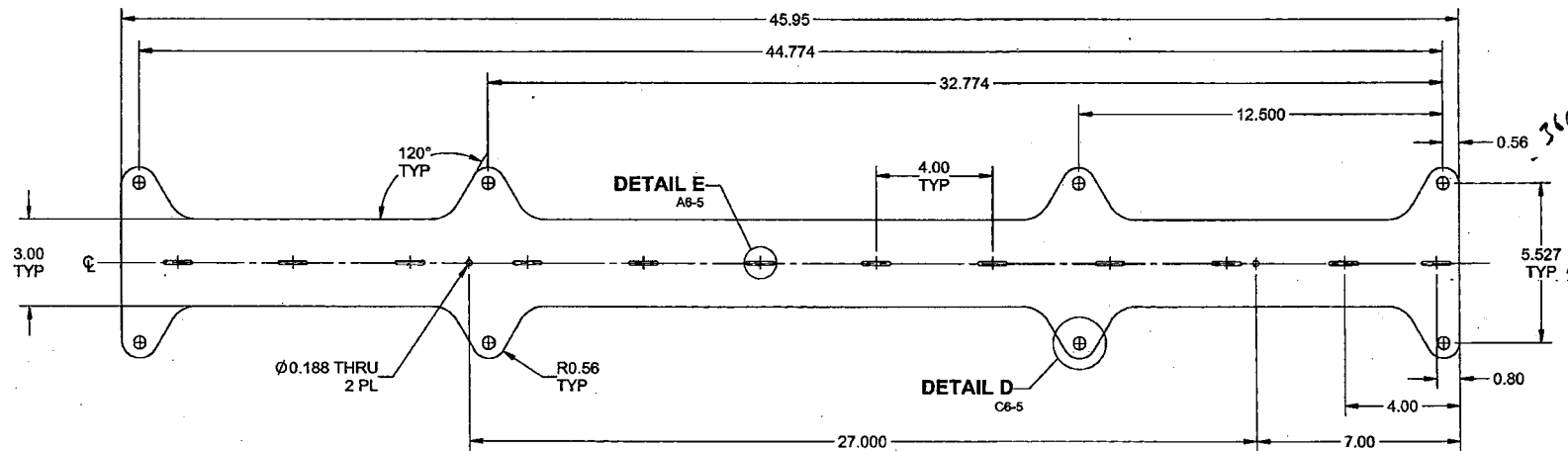
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4370-1 PLATE
(MAKE FROM D4370-1F)



D4370-1F PLATE

WLB 68407

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR 5524 OR ASTM A240 OR ASME SA240 18 GAUGE (0.050 THICK), REF. DART SPEC. M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 2.25 lbs

**PRELIMINARY
ISSUE**

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED	JP	DRAWING NO.	REV. PA1
MFG. APPR.	JP	D4370	SHEET 3 OF 5
APPROVED	JP	TITLE	SCALE
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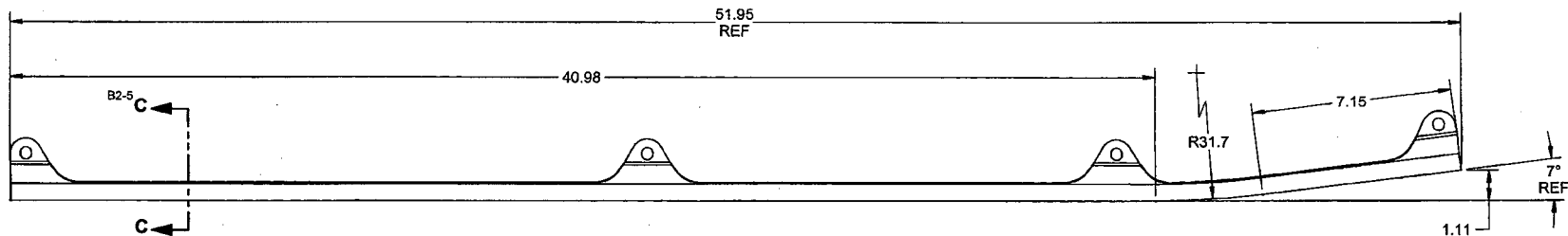
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

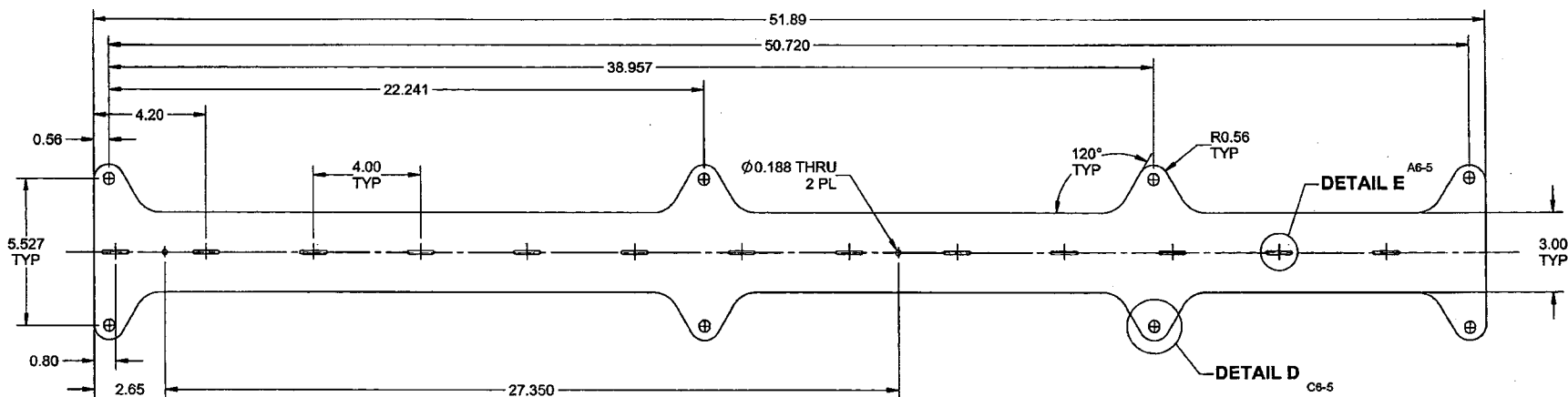
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DATE	STEP	Description of NC Section A	Corrective Action Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng			

NOTE: Date & initial all entries



D4370-3 PLATE
(MAKE FROM D4370-3F)



D4370-3F PLATE

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR 5524 OR ASTM A240 OR ASME SA240 18 GAUGE (0.050 THICK), REF. DART SPEC. M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 2.51 lbs

**PRELIMINARY
ISSUE**

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DRAWN	SC	PORT HADLOCK, WA	
CHECKED	UP	DRAWING NO.	REV. PA1
MFG. APPR.	MA	D4370	SHEET 4 OF 5
APPROVED		TITLE	SCALE
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w/u 68407

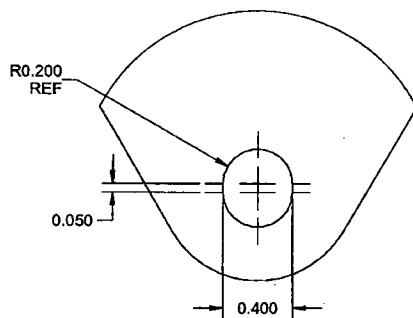
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

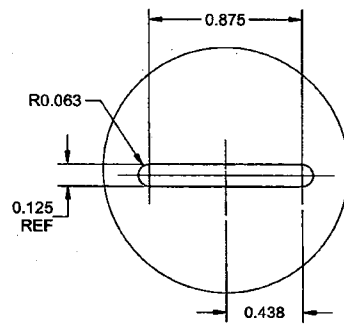
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

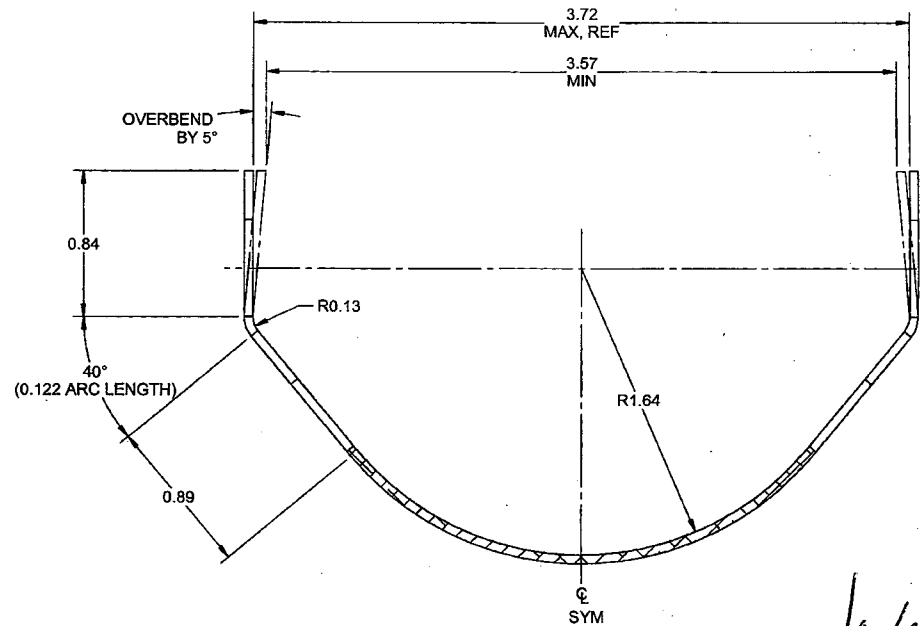
NOTE: Date & initial all entries



DETAIL D
SLOT DETAIL TYP
B3-3
B2-4



DETAIL E
SLOT DETAIL TYP
B5-3
B1-4



SECTION C-C
D3-3
D7-4

w/o 68407

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DRAWN	SC	PORT HADLOCK, WA	
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MFG. APPR.	<i>JP</i>	D4370	SHEET 5 OF 5
APPROVED	<i>JP</i>	TITLE	SCALE
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W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 68407
Description: FWD WEARPLATE ASSEMBLY		Part Number: D4370 - 041
Inspection Dwg: D4370-1, Rev: PM		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☒ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.400	+/- .010	.402	X		V HB2	
.125	+/- .010	.127	X		V	
.875	+/- .010	.875	X		V	
5.527	+/- .010	5.522	X		V	
.56	+/- .030	.558	X		V	
.86	+/- .030	.860	X		V	
4.00	+/- .030	4.00	X		V	
7.00	+/- .030	7.005	X		V	
3.00	+/- .030	3.006	X		V	
φ .188	+ .005 - .001	.193	X		V	
12.500	+/- .010	12.500	X		T HB1	
27.000	+/- .010	27.000	X		T	
32.714	+/- .010	32.714	X		T	
44.714	+/- .010	44.714	X		T	
45.95	+/- .030	45.95	X		T	
.050	+/- .010	.047	X		V	

Measured by: HB	Audited by: S	Prototype Approval:
Date: 11-4-19	Date: 11/6/19	Date:
Revised by: KJ/JLM Approved:		

HB Asst Dir only